

Work Order ID 92117

October 23, 2012 9:25:43 AM

92117

Page 1

Item ID: 647.2201

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cross Assembly

Start Date: 10/23/12 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/19/12 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: *CL*

Date: *12/10/22* Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence Work Center ID	Operation Description	Set Up/ Run Hours	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
----------------------------	--------------------------	----------------------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr

Revision Nbr

647.1300

100

0.00

12-10-24

5

100

Bandsaw

BAND SAW

Memo

N/A

0.00

12-11-05

5

Jeaspa Bandsaw

Cut Blank at 16.500"

110

0.00

110

Outsource5

Memo

0.00

Outsource process - Machining

ISSUE P/O:

POSSIBLE SUPPLIER

APICAL P/O: 18391

Certificate of conformaty required

CL 12-10-22 10
12/11/13 5

115

0.00

115

Packaging

Receive & Inspect for Damage & Mat'l Certs

Memo

0.00

Packaging

CL 12/11/16 5

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector			
Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
Operator <input type="checkbox"/>												
Material <input type="checkbox"/>												
Setup <input type="checkbox"/>												
Other <input type="checkbox"/>												
Process <input type="checkbox"/>												
Supplier <input type="checkbox"/>												
Training <input type="checkbox"/>												
Unapproved <input type="checkbox"/>												
FAULT CATEGORY												
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other <hr/> <hr/> <hr/>	

Work Order ID 92117

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Page 2

Item ID: 647.2201

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cross Assembly

Start Date: 10/23/12 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/19/12 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence 107
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberResp.
Stamp

117

QC6- Inspect dimensions to drawing

0.00

117

QC

Memo

0.00

Quality Control

140

Outsource process-Anodize per QSI017 4.1.10.1

0.00

140

Outsource4

Memo

0.00

Outsource process - Anodize

Issue P/O:

Black Anodize as per Dwg 646.9700

150

Receive & Inspect for Damage & Mat'l Certs

0.00

150

Packaging

Memo

0.00

Packaging

n/7 Purchased Anod
5/2/12/12

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 92117

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Page 3

Item ID: 647.2201

Accept

N900040100Setup Start ***NS1***

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Stop ***NS2***

Item Name: Cross Assembly

Start Date: 10/23/12 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/19/12 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID:

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

155

QC5- Inspect part completeness to step on W/O

0.00

155

QC

Memo

0.00

Quality Control

156

0.00

156

Small Fab

Memo

0.00

Small Fab

install helical inserts as per dwg

158

QC5- Inspect part completeness to step on W/O

0.00

158

QC

Memo

0.00

Quality Control

W/A
Purchased at April
5/12/12

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
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Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											

FAULT CATEGORY				
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio	<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge	<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other

Work Order ID 92117

October 23, 2012 9:25:43 AM

92117

Page 4

Item ID: 647.2201

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cross Assembly

Start Date: 10/23/12 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/19/12 Req'd Qty: 10.00

10

Customer:

Reference:

Run Start ***NR1***

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop ***NR2***

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

Spray Painting per QSI005 4.2

0.00

160

SprayPaint

Spray Painting

Memo

PRIME AS PER DWG, SEE NOTE #2

CARDINAL 4860-50 PRIMER BATCH: _____

0.00

170

QC14- Inspect Spray Paint

0.00

170

QC

Quality Control

Memo

0.00

180

Identify as per dwg & Stock Location: 50

0.00

180

Packaging

Packaging

Memo

IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV

0.00

W/L4
Pushed @ Apical
8/21/12

10/24/12 7 (5)

Work Order ID 92117

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92117

Page 5

Item ID: 647.2201

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Cross Assembly

Start Date: 10/23/12 Start Qty: 10.00

10

Cust Item ID:

Required Date: 11/19/12 Req'd Qty: 10.00

10

Customer:

Reference:

Run Start ***NR1***

Approvals: Process Plan:

Date:

Tooling:

Date:

Stop ***NR2***

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

12/11/29 JF

12-11-28

Picklist Print

October 23, 2012 9:25:43 AM

Page 1

Work Order ID: 92117
Parent Item: 647.2201
Parent Item Name: Cross Assembly

Start Date: 10/23/12 Required Date: 11/19/12
Start Qty: 10.00 Required Qty: 10.00

Comments: IPP REV:A NEW ISSUE 12-10-22 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B2.250X02.750		Purchased	No				f	0.0000		6.49	7.75	12-10-24	
7075-T6 BAR 2.250" X 2.750"	N/A				MT23418								
MS21209F1-10		Purchased	No		123555		Each	100.0000		60	7.75	12-11-05	
HELICOIL													

Location	Loc Qty	Loc Code
319	92	
122469	92	
ST304	8	
116977	8	

647.2201P

X10

12/14/10 (5)

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

DART AEROSPACE LTD		Work Order: B92117
Description: Cross and		Part Number: 167-2201
Inspection Dwg: 167-2201 Rev:		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.88	± 0.020	1.892	✓		✓	
16.13	± 0.030	16.140	✓		✓	
1.38	± 0.030	1.378	✓		✓	
1.25	± 0.030	1.255	✓		✓	
3.65	± 0.030	3.65	✓		✓	
.25	± 0.030	.285	✓		✓	
Ø 2.01	± 0.004	.200	✓		✓	
0.58	± 0.030	.578	✓		✓	
0.38	± 0.020	.377	✓		✓	
28°	± 1	28°	✓		✓	
12°	± 1	12°	✓		✓	
S 20	± 0.020	S 24	✓		✓	
.38	± 0.030	.386	✓		✓	
20	± 0.030	205	✓		✓	
1.625	± 0.010	1.628	✓		✓	
0.38	± 0.030	0.382	✓		✓	

Measured by: DAS 15	Audited by: S	Preliminary Approval:
Date: 12/11/22	Date: 2/14/23	Date:

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02678				SHEET 1 OF 1	
	DWG NO. 647.2200	REV: N/C	PREPARED BY R. ROSANO	DATE: 09/01/10	EFFECT ON DWG <input type="checkbox"/> INC. <input checked="" type="checkbox"/> UNINC.	
	DWG TITLE: CROSS ASSY					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: ADDED DELTA NOTE 6, LOCATE SPECIFIC HOLES FOR HELICAL INSERT					

SHEET 1, A1 IS:

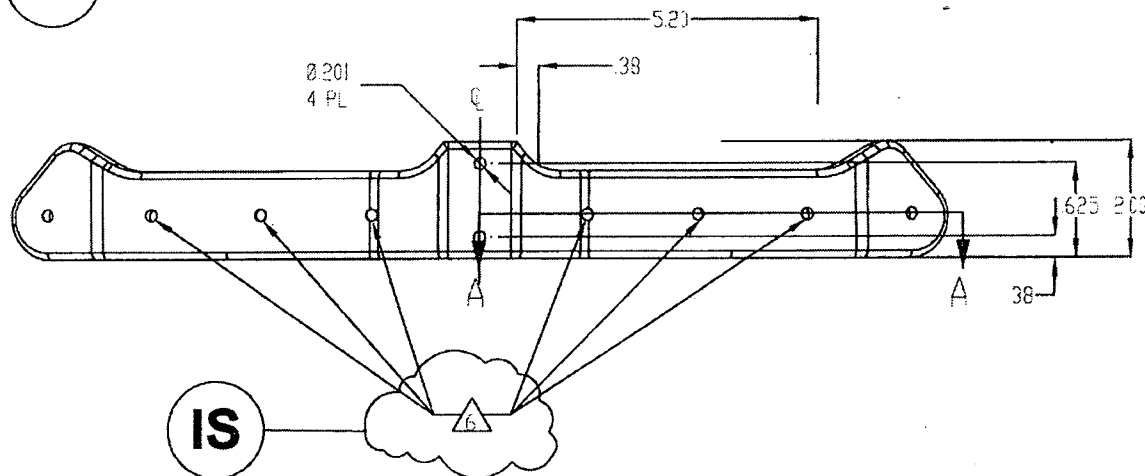
NOTES:

1. MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
2. FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK
CARD: 4850-54 PRETREATMENT PRIMER
PRIME IAW MIL-F-23377J TYPE I CLASS N
3. PART DIMENSIONS CONTROLLED BY CAD MODEL
F/N 1 FILE NAME: 647.2210 REV PRI CROSS LAST MODIFIED 06/09/03
4. DEBURR AND BREAK ALL SHARP EDGES
5. IDENTIFY IAW MPR-120

△ INSTALL F/N 2, HELICAL INSERTS AFTER ANODIZING. TAP FOR #10-32
HELICAL INSERT = 1.0" DIA. 6 PL.

IS

SHEET 3, B4 IS:



IS

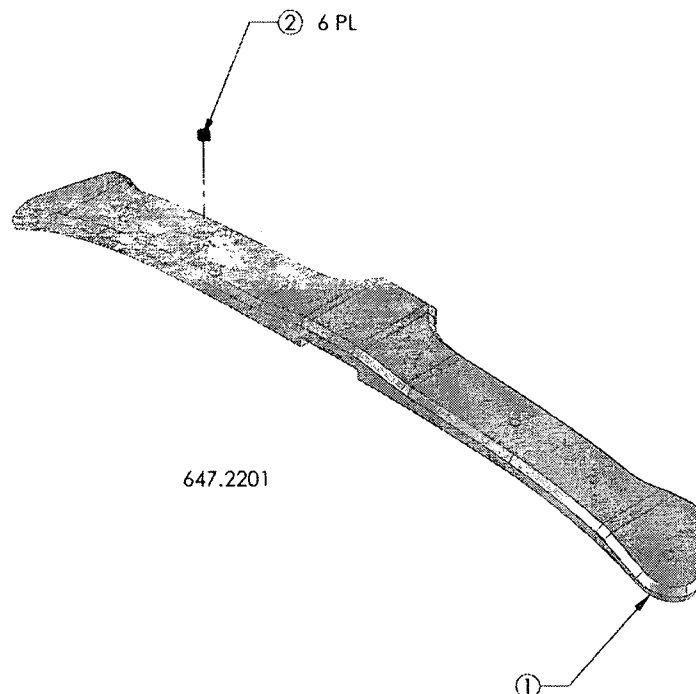
2	R	601.0987	6	HELICAL INSERT	MS21209F110	6
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
			2201			
DOCUMENTS EFFECTED:				CHANGE CATEGORY	DER REVIEW REQUIRED	
<input type="checkbox"/> MDL <input type="checkbox"/> INSTALL INSTRUC <input type="checkbox"/> ICA <input type="checkbox"/> BOM				<input type="checkbox"/> MAJOR <input checked="" type="checkbox"/> MINOR	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVAL
1	LAST PRODUCTION REVISED 06/09/09		N/C
2	INITIAL RELEASE	06/09/09	P. SP. A. C.

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 PART DIMENSIONS CONTROLLED BY CAD MODEL
F/N 1 FILE NAME: 647.2210 REV PR1 CROSS LAST MODIFIED 06/09/09
- 4 DEBURR AND BREAK ALL SHARP EDGES
- 5 IDENTIFY IAW MPP-120



UNINCORPORATED ECN(s)

02698

6	2	601.0987	HELICAL INSERT	MS21209F110	
1	1	647.2210	CROSS		
		647.2201	CROSS ASSY		
	2201	FIND #	PART #	DESCRIPTION	MAT'L SPEC.
QTY			PARTS LIST		
NEXT ASSY (S)			APICAL INDUSTRIES		
647.1300			2808 TEMPLE HEIGHTS DR.		
			OCEANSIDE, CA 92056-5512 (760)724-5300		
			CROSS ASSY		
			EX. 28.0000	QTY. 10	REV. N/C
			SCALE: NONE	SHEET 1 OF 3	

1 2 3 4 5 6 7 8

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647.2210 $\triangle 3$

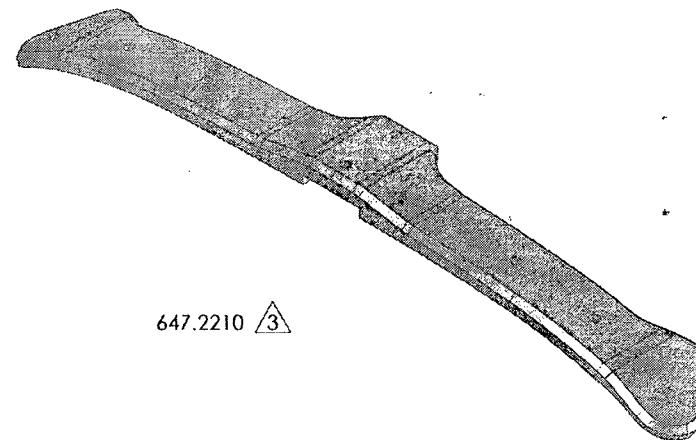
1.88
11.16
44.58
5.45
3.63
1.25
R34.00
R13.25
R1.00
6 PL
1.25 X 45° COM
R44.00
R10.50
R4.50
1.38
.39
1.08
3.44
5.28
16.13
.25

DESIGNED BY J. G. D. 1/71	DATE 01/01/71
DRAWN BY J. G. D. 1/71	DATE 01/01/71
CHECKED BY J. G. D. 1/71	DATE 01/01/71
APPROVED BY J. G. D. 1/71	DATE 01/01/71
CONTRACT NO.	
ITEM NO.	
QUANTITY	
SCALE	
SHEET 2 OF 2	

APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760) 724-5300

CROSS ASSY

FILE CODE: 647.2200
ENG. NO. 647.2200
SCALE: NONE
SHEET 2 OF 2

647.2210 $\triangle 3$

ORIGINAL DATE	
[MO-DA-YR]	06-09-09
DEVELOPED BY	CHIEF OF
J. GAMBIR	P. BRAYO
ISSUING APPROVAL	
P. BRAYO	
CONTACT NO.	

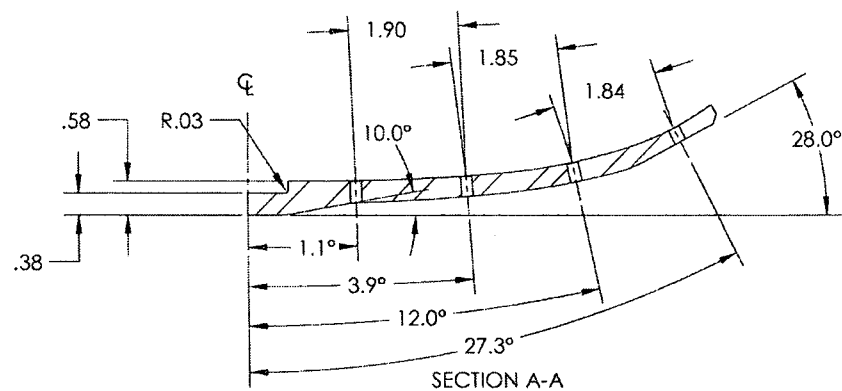
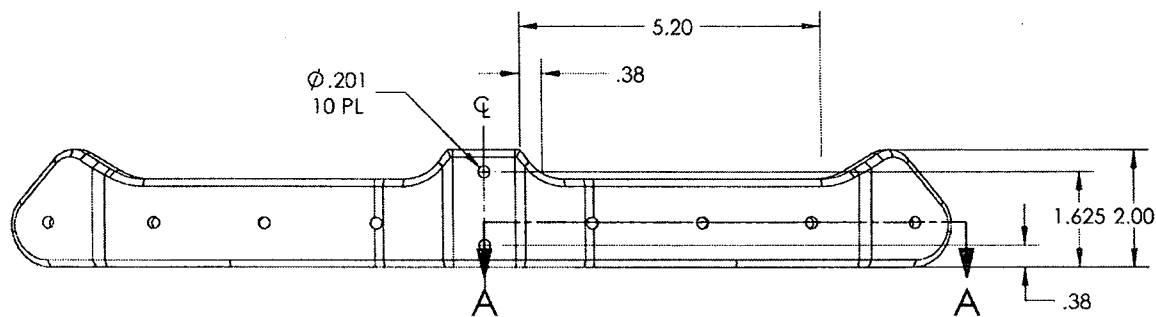
APICAL INDUSTRIES
2608 TEMPLE HEIGHTS DR.
OCEANSIDE, CA. 92056-3512 (760)724-5300

CROSS ASSY

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
2 PLACE DECIMALS ± 0.01
3 PLACE DECIMALS ± 0.001
ANGLES $\pm 5^\circ$

SHEET CODE B 07M26	DWG. NO. 647.2200	REV N/C
SCALE: NONE	SHEET 2 OF 3	

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INFORMATION DATE REVISIONS DRAWN BY J. CLAMPSON CHECKED BY P. BENYD UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACES DECIMALS ± .01 3 PLACES DECIMALS ± .005 ANGLES ± .5°		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CONTRACT NO.		CROSS ASSY	
SIZE B	CAGE CODE 07MZZ	DWG. NO. 647.2200	REV. 1/H/C
SCALE: NONE		SHEET 3 OF 3	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO18391**

Purchase Order Date 11/12/12

PO Print Date 11/13/12

Page Number 1 of 1

Order From :

VU-APP001

APICAL INDUSTRIES INC.
2608 TEMPLE HEIGHTS DRIVE
OCEANSIDE, CA 92056
US

Contact Name

Vendor Phone

760 724 5300

Vendor Fax

Vendor Account Nbr

Buyer

Chantal Lavoie

Requisition Nbr

Tax Resale Nbr

10127-2607

Terms

Net 30

Currency

USD

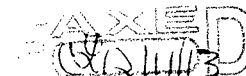
FOB


Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA



Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	647.2201P 	Cross Assembly	11/27/12 Yes	5.00 Each	FedEx PI collect	\$211.0000	\$1,055.00

Special Inst:

AS PER DWG D647.2201
B92117

PO Total:

\$1,055.00

CERTIFICATE OF CONFORMITY
REQ'D UPON DELIVERY

Change Nbr: 2

Change Date: 11/13/12

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required - YES NO

Apical Industries, Inc.

Packing List

2608 Temple Heights Drive
Oceanside, CA 92056
760-724-5300

No: 11696

Bill To:

Ship To:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, CANADA K6A 1K7

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

Customer PO	Ship Date	Order Date	Tracking Number
PO18391	11/14/2012	11/14/2012	4783 0099 8412

Part No.	Description	Serial Number	Cond	Qty	Qty B/O
647.2201	CROSS ASSY		NE	5	0

Condition: NE - New

Apical Industries, Inc.

2608 Temple Heights Drive

Oceanside, CA 92056

760-724-5300

SITA

ORIGINAL

Shipping Order No: 11696

Bill To:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, CANADA K6A 1K7

Ship To:

DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

8130-3: MG12-419

Customer PO

Ship Date**Order Date**

PO18391

11/14/2012

11/14/2012

Part No.

Description

Serial Number

Cond

Qty**S/L**

control #
77552-2

647.2201

CROSS ASSY

NE

5

3

77552-2

Condition: NE - New

This is to certify that the items identified herein have been manufactured, assembled, inspected and/or tested in accordance with the Federal Aviation Administration (FAA), Department of Transportation (DOT) and all Apical Industries, Inc. applicable specifications, drawings and other purchase order requirements. **DWG 647.2200 REV NC**

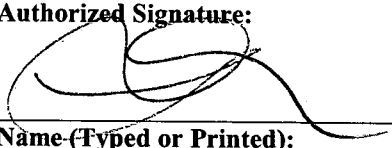
Signed:

For and on behalf of Apical Industries, Inc.

Quality Assurance

Inspectors Stamp:

APICAL
QA 01
ACCEPT

1. Approving National Aviation Authority/Country: • FAA/UNITED STATES		2. AUTHORIZED RELEASE CERTIFICATE FAA Form 8130-3, AIRWORTHINESS APPROVAL TAG				3. Form Tracking Number: MG12-419	
4. Organization Name and Address: Apical Industries, Inc. 2608 Temple Heights Drive Oceanside, CA 92056						5. Work Order/Contract/Invoice Number: Shipper # 11696 P.O. # PO18391	
6. Item: 1.	7. Description: Cross Assy	8. Part Number: 647.2201	9. Eligibility: * N/A	10. Quantity: 5	11. Serial/Batch Number: 77552-2	12. Status/Work: NEW	
13. Remarks: EXPORT A. Item 1 is a subcomponent of FAA STC SR02290LA. ECN 02678. B. Items are being shipped to Dart Aerospace Ltd in Hawkesbury, ON, Canada. C. Last item entered.....							
14. Certifies the items identified above were manufactured in conformity to: <input checked="" type="checkbox"/> Approved design data and are in condition for safe operation <input type="checkbox"/> Non-approved design data specified in Block 13.				19. <input type="checkbox"/> 14 CFR 43.9 Return to Service <input type="checkbox"/> Other regulation specified in Block 13 Certifies that unless otherwise specified in block 13, the work identified in Block 12 and described in Block 13 was accomplished in accordance with Title 14, Code of Federal Regulations, part 43 and in respect to that work, the items are approved for return to service.			
15. Authorized Signature: 		16. Approved/Authorization No.: DMIR 606259-NM		20. Authorized Signature:		21. Approval/Certificate No.:	
17. Name (Typed or Printed): Lisa Mansfield		18. Date (m/d/y): November 14, 2012		22. Name (Typed or Printed):		23. Date (m/d/y):	
User/Installer Responsibilities							
It is important to understand that the existence of this document alone does not automatically constitute authority to install the part/component/assembly.							
Where the user/installer performs work in accordance with the national regulations of an airworthiness authority different that the airworthiness authority of the country specified in Block 1, it is essential that the user/installer ensures that his/her airworthiness accepts parts/components/assemblies from the airworthiness authority of the country specified in Block 1.							
Statements in Blocks 14 and 19 do not constitute installation certification. In all cases, aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.							
FAA Form 8130-3(6-01)		*Installer must cross-check eligibility with applicable technical data.				NSN: 0052-00-012-9005	